

What is claimed is:

1. A method for generating a sprite from at least an initial input image, comprising the step of:

providing an initial estimate of motion parameter data for providing a registration between the sprite and the initial input image based on motion parameter data of at least two input images that precede the initial input image.

2. The method of claim 1, wherein:

the initial estimate is provided based on a linear function of the motion parameter data of the at least two input images that precede the initial input image.

3. The method of claim 1, wherein:

the initial estimate is provided based on a non-linear function of the motion parameter data of the at least two input images that precede the initial input image.

4. The method of claim 1, wherein:

the initial estimate S_n is provided according to: $S_n = S_{n-1} + (S_{n-1} - S_{n-2})$, where S_{n-1} is the motion parameter data of an input image that precedes the initial input image, and S_{n-2} is the motion parameter data of the next preceding input image.

5. The method of claim 1, wherein:

the at least two input images that precede the initial input image are associated with a different

sprite than the sprite that is associated with the initial input image.

6. A method for generating a sprite from a plurality of input images, comprising the step of:
performing shot detection on the input images to provide a group of successive images that share a common scene for use in forming the sprite.

7. The method of claim 6, wherein:
the scene is a static background.

8. The method of claim 6, wherein:
the shot detection detects at least one of zooming and panning.

9. The method of claim 6, comprising the further step of:
providing an initial estimate of motion parameter data for providing a registration between the sprite and an initial input image using block matching when panning is detected.

10. The method of claim 6, comprising the further step of:
providing an initial estimate of motion parameter data for providing a registration between the sprite and an initial input image with block matching turned off when zooming is detected.

11. The method of claim 6, wherein:

the shot detection comprises scene detection.

12. A method for generating a sprite from at least an initial input image, comprising the steps of:

providing at least first and second successive estimates of motion parameter data for providing a registration between the sprite and the initial input image;

determining at least first and second errors between pixels of the initial input image and pixels of the sprite based on the at least first and second estimates, respectively;

wherein the second estimate is obtained by updating the first estimate based on the first error; and

eliminating the pixels whose second error exceeds their first error from consideration in generating the sprite.

13. The method of claim 12, comprising the further step of:

designating pixels in the initial input image and/or the sprite whose first error exceeds a threshold as probable outliers;

wherein the second error is obtained at least for the pixels designated as probable outliers.

14. The method of claim 12, wherein:

the first and second errors are determined using a Levenberg-Marquardt minimization technique.

15. A method for generating sprite data from at

least one initial input image that comprise interlaced first and second fields, comprising the steps of:

generating separate first and second field sprites with separate motion parameter data for the first and second fields, respectively, of the at least one input image; and

encoding the first field sprite and its associated motion parameter data separately from the second field sprite and its associated motion parameter data for transmission to at least one decoder.

16. The method of claim 15, wherein:

a presentation engine at the at least one decoder combines the first field sprite and second field sprite transmitted thereto to form a combined sprite output.

17. A method for processing sprite data at a decoder, comprising the steps of:

receiving data transmitted from an encoder, said data comprising an encoded first field sprite and its associated motion parameter data, and a separately encoded second field sprite and its associated motion parameter data;

wherein the first and second field sprites are generated from interlaced first and second fields, respectively, of at least one initial input image at the encoder;

decoding the encoded first field sprite and its associated motion parameter data to provide a first field sprite output;

decoding the encoded second field sprite and its

associated motion parameter data to provide a second field sprite output; and

combining the first field sprite output and second field sprite output to form a combined sprite output.

18. An apparatus for generating a sprite from at least an initial input image, comprising:

means for providing an initial estimate of motion parameter data for providing a registration between the sprite and the initial input image based on motion parameter data of at least two input images that precede the initial input image.

19. An apparatus for generating a sprite from a plurality of input images, comprising:

means for performing shot detection on the input images to provide a group of successive images that share a common scene for use in forming the sprite.

20. An apparatus for generating a sprite from at least an initial input image, comprising:

means for providing at least first and second successive estimates of motion parameter data for providing a registration between the sprite and the initial input image;

means for determining at least first and second errors between pixels of the initial input image and pixels of the sprite based on the at least first and second estimates, respectively;

wherein the second estimate is obtained by updating the first estimate based on the first error; and

means for eliminating the pixels whose second error exceeds their first error from consideration in generating the sprite.

21. An apparatus for generating sprite data from at least one initial input image that comprise interlaced first and second fields, comprising:

means for generating separate first and second field sprites with separate motion parameter data for the first and second fields, respectively, of the at least one input image.

22. A decoder for processing sprite data, comprising:

means for receiving data transmitted from an encoder, said data comprising an encoded first field sprite and its associated motion parameter data, and a separately encoded second field sprite and its associated motion parameter data;

wherein the first and second field sprites are generated from interlaced first and second fields, respectively, of at least one initial input image at the encoder;

means for decoding the encoded first field sprite and its associated motion parameter data to provide a first field sprite output;

means for decoding the encoded second field sprite and its associated motion parameter data to provide a second field sprite output; and

a presentation engine for combining the first field sprite output and second field sprite output to form a

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